VPDES PERMIT FACT SHEET

This document gives pertinent information concerning the reissuance of the Virginia Pollutant Discharge Elimination System (VPDES) permit listed below. This permit is being processed as a Minor, Municipal permit. The effluent limitations contained in this permit will maintain the Water Quality Standards (WQS) of 9VAC25-260. The proposed discharge will result from the operation of a municipal sewage treatment plant (SIC Code: 4952 - Sewerage Systems). This permit action consists of reissuing the permit with revisions to the permit, as needed, due to changes in applicable laws, guidance, and available technical information.

1. Facility Name and Address:
   Harriston WWTP
   PO Box 859
   Verona, VA 24482
   Location: 125 Essex Road, Grottoes, Virginia 24441

2. Permit No. VA0027901; Expiration Date: June 30, 2016

3. Owner: Augusta County Service Authority
   Contact Name: Kenneth J. Fanfoni, P.E.
   Title: Executive Director
   Telephone No: (540) 245-5670
   Email: kfanfoni@co.augusta.va.us

4. Description of Treatment Works Treating Domestic Sewage:

   Harriston WWTP serves a residential development in the Harriston area, east of Route 340. Wastewater generated from these sources is treated in an aerated lagoon treatment system and discharged to the South River. Treatment consists of an influent pump station, shredder/bar screen, multi-cell lagoon with floating aerators and baffle curtains, chlorination, effluent flow measurement, and buried discharge line extending several hundred feet to outfall location on South River.

   Permitted Flow Tier: 0.040 MGD
   Design Flow: 0.10 MGD
   Average Flow: 0.038 MGD (April 2014 – March 2016*)
   * no flow data from September 2014 to February 2015 due to lagoon liner replacement

5. Application Complete Date: December 23, 2015

   Permit Writer: Eric Millard Date: April 21, 2016
   Reviewed By: Dawn Jeffries Date: April 21, 2016

   Public Comment Period: _____ to _____

6. Receiving Stream Name: South River
   River Mile: 8.2
   Use Impairment: Yes
   Special Standards: pH
   Tidal Waters: No
   Watershed Name: VAV – B32R South River
   Basin: Potomac; Subbasin: Shenandoah
   Section: 3; Class: IV

7. Operator License Requirements per 9VAC25-31-200.C: Class III

8. Reliability Class per 9VAC25-790: Class II (assigned June 22, 1978 by VDH)

9. Permit Characterization:
☐ Private ☐ Federal ☐ State ☑ POTW ☐ PVOTW
☐ Possible Interstate Effect ☐ Interim Limits in Other Document (attach copy of CSO)

10. Discharge Location Description and Receiving Waters Information: Appendix A

11. Antidegradation (AD) Review & Comments per 9VAC25-260-30:
Tier Designation: Tier 1

The State Water Control Board's WQS include an AD policy. All state surface waters are provided one of three levels of AD protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 waters have water quality that is better than the WQS. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 waters are exceptional waters and are so designated by regulatory amendment. The AD policy prohibits new or expanded discharges into exceptional waters.

The AD review begins with a Tier determination. South River downstream of the facility discharge location is determined to be Tier 1 because the stream does not meet the General Standard (Benthics) for aquatic life use. AD baselines are not calculated for Tier 1 waters.

Because the receiving stream was determined to be a Tier 2 water in 2006 and the change in tier determination was not caused by DO or Ammonia-N, DO and Ammonia-N were evaluated on a Tier 2 basis as was done during the previous reissuance based on Agency guidance*. The DO AD baseline of 7.2 mg/L has been carried forward from the 2006 reissuance permit (refer to Appendix C, page 3 of the 2006 Reissuance Fact Sheet dated April 5, 2006). Ammonia-N baselines are updated at this reissuance (refer to Appendix B, page 10) and summarized below:

Parameter	Baseline	
	Acute	Chronic
Ammonia-N	0.50 mg/L	0.10 mg/L

* Expanded number of exclusions for Tier determinations in Guidance Memo No. 00-2011 found in the advice memo "Improved Communications between Water Permit and Assessment Programs" dated February 8, 2005.

12. Impaired Use Status Evaluation per 9VAC25-31-220.D: The South River in the immediate vicinity of the discharge is listed as impaired in the currently approved 303(d) list. It has been assigned the following waste load allocations (WLAs) in South River TMDLs based on a design flow of 0.10 MGD at the concentrations shown:

Parameter	TMDL WLA	Concentration
E. coli	1.74×10^{11} cfu/year	126 N/100 mL
Sediment	4.1 metric tons/year	TSS = 30 mg/L
Total Phosphorus	2348.3 kg/year*	2.5 mg/L

*This is a combined allocation for ACSA facilities: Stuarts Draft WWTP, Harriston WWTP, and Vesper View STP.

13. Site Inspection: Performed by Lisa Kelly on June 17, 2013

14. Effluent Screening and Effluent Limitations: Appendix B

15. Effluent toxicity testing requirements included per 9VAC25-31-220.D: ☐Yes ☑ No
    This STP has a design flow < 1.0 MGD, has no Significant Industrial Users (SIUs) or Categorical Industrial Users (CIUs), and is not deemed to have the potential to cause or contribute to instream toxicity.

16. Management of Sewage Sludge: Harriston WWTP is included in the Biosolids Management Plan for the Augusta County Service Authority. Harriston WWTP is a lagoon system and is large enough for sludge storage. When sludge removal is needed, ACSA will submit an amendment to their plan that outlines the disposal method to be employed. Current options available to ACSA in their approved plan include:

    - Dewatering and transport to the Augusta Regional Landfill
    - Transport of sludge to Stuarts Draft WWTP, Fishersville Regional WWTP or Middle River Regional WWTP for blending, further treatment, and disposal
    - Land application by Houff's Feed and Fertilizer under the authorization of VPA Permit No. VPA01566, VPA01580, or VPA01581

17. Bases for Special Conditions: Appendix C

18. Material Storage per 9VAC25-31-280.B.2: This permit requires that the facility's O&M Manual include information to address the management of wastes, fluids, and pollutants which may be present at the facility, to avoid unauthorized discharge of such materials.

19. Antibacksliding Review per 9VAC25-31-220.L: This permit complies with the antibacksliding provisions of the VPDES Permit Regulation.

20. Regulation of Users per 9VAC25-31-280.B.9: N/A – This facility is owned by a municipality.

21. Stormwater Management per 9VAC25-31-120: Application Required? ☑ Yes ☐ No

    The permittee submitted a No Exposure Certification (NEC) Statement with the permit reissuance application. The NEC was reviewed by DEQ inspectors on December 30, 2015, and they had no comments. The NEC is to be approved with the reissuance of the permit.

22. Compliance Schedule per 9VAC25-31-250: There are no compliance schedules included in the reissued permit.

23. Variances/Alternative Limits or Conditions per 9VAC25-31-280.B, 100.K, and 100.N: The applicant requested a waiver for sampling the parameters listed on Form 2A Part D Expanded Effluent Testing. This waiver was granted, because while this facility is included in the ACSA Pretreatment Program the facility receives no discharges from Significant Industrial Users and has a design flow of 0.10 MGD.

24. Financial Assurance Applicability per 9VAC25-650-10: N/A – This facility is owned by a municipality.

25. Virginia Environmental Excellence Program (VEEP) Evaluation per § 10.1-1187.1-7: At the time of this reissuance, is this facility considered by DEQ to be a participant in the Virginia Environmental Excellence Program in good standing at either the Exemplary Environmental Enterprise (E3) level or the Extraordinary Environmental Enterprise (E4) level? ☑ Yes ☐ No

26. Nutrient Trading Regulation per 9VAC25-820: See Appendix B
    General Permit Required: ☑ Yes ☐ No
    This facility is required to maintain coverage under the General VPDES Watershed Permit Regulation for Total Nitrogen (TN) and Total Phosphorus (TP) Discharges and Nutrient Trading in the Chesapeake Bay

Watershed in Virginia ("WGP"; 9VAC25-820) because it is listed with a WLA in the Registration List in 9VAC25-820-70.

27. Nutrient monitoring included per Guidance Memo No. 14-2011: ☐ Yes ☑ No

    This facility is a Nonsignificant Discharger (all facilities not classified as Significant Dischargers as defined in the WGP) but is "bubbled" with other facilities owned by ACSA and for that reason the facility monitors for TN and TP under its nutrient general permit, VAN010092. No additional monitoring is necessary.

28. Threatened and Endangered (T&E) Species Screening per 9VAC25-260-20.B.8: Because this is not an issuance or reissuance that allows increased discharge flows, T&E screening is not automatically required. However, in accordance with the VPDES Memorandum of Understanding, T&E screening was coordinated on July 28, 2015 through DCR based upon request. Comments were received from DCR on August 24, 2015 and are included in the permit processing file. Comments were considered in the drafting of the permit and were also forwarded to the permittee.

29. Public Notice Information per 9 VAC 25-31-280.B: All pertinent information is on file, and may be inspected and copied by contacting Eric Millard at: DEQ-Valley Regional Office, P.O. Box 3000, Harrisonburg, Virginia 22801, Telephone No. (540) 574-7813, eric.millard@deq.virginia.gov.

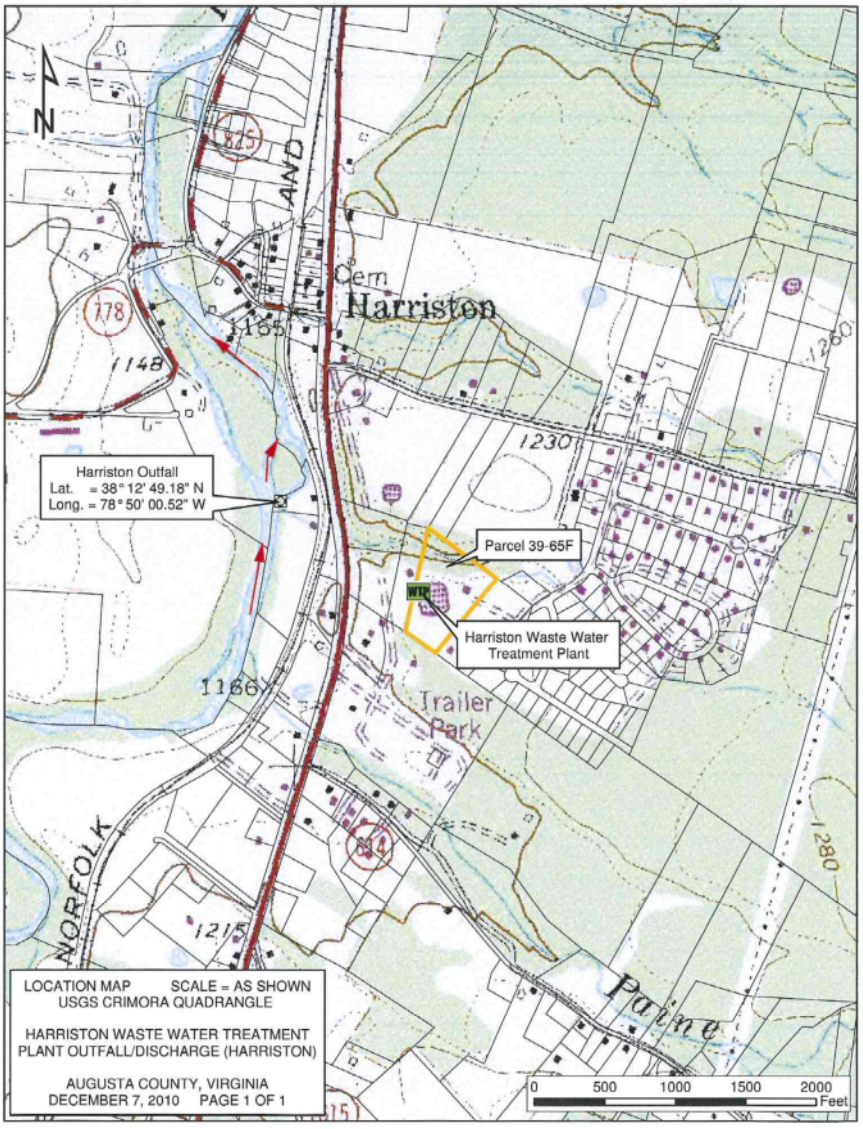
    Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given.

30. Historical Record:
    - Date Discharge First Commenced: The lagoon began operation by the Harriston Service Corporation in March 1970. LHS-120 Certificate No. 2124 was issued April 5, 1971 for 0.041 MGD.
    - VPDES Permit VA0027901 was originally issued on August 1, 1975. Design Flow at Issuance: 0.041 MGD
    - A permit Revocation & Reissuance was signed September 24, 1991, which included a design flow of 0.040 MGD and an expansion flow tier of 0.10 MGD.
    - The permit signed July 3, 1996 still contained the 0.040 MGD flow tier and expansion flow tier of 0.10 MGD.
    - The CTO for the 0.10 MGD flow tier was issued July 29, 1996.
    - Permit reissuance on July 4, 2006. Expiration Date: June 30, 2011. Design Flow: 0.10 MGD
    - Permit was modified on February 20, 2007. The permit modification involved revising the permit language regarding the reporting of monitoring results.
    - Permit reissuance on July 4, 2006. Expiration Date: June 30, 2011. Design Flow: 0.10 MGD
    - Permit reissuance on July 1, 2011. Expiration Date: June 30, 2016. Design Flow: 0.10 MGD

APPENDIX A

DISCHARGE LOCATION AND RECEIVING WATERS INFORMATION

Harriston WWTP discharges to South River in Augusta County. The topographical map below shows the location of the treatment facility and Outfall 001.



PLANNING INFORMATION

Relevant points of interest within the watershed and in the vicinity of the discharge are shown on the Water Quality Assessments Review table below.

WATER QUALITY ASSESSMENTS REVIEW
POTOMAC-SHENANDOAH RIVER BASIN
12/31/2015

IMPAIRED SEGMENTS

SEGMENT ID	STREAM	SEGMENT START	SEGMENT END	SEGMENT LENGTH	PARAMETER
B32R-01-BEN	South River	29.58	0.00	29.58	Benthic
B32R-02-BAC	South River	39.74	0.00	39.74	E-coli, Fecal Coliform
B32R-02-HG	South River/NF Shena	163.27	8.16	155.11	Mercury in Fish Tissue
B32R-02-PCB	South River	5.29	0.00	5.29	PCB in Fish Tissue
B32R-03-PH	Paine Run	6.26	0.00	6.26	pH

PERMITS

PERMIT	FACILITY	STREAM	RIVER MILE	LAT	LONG	WBID
VA0027901	**Harriston WWTP**	**South River**	**8.20**	**381249**	**0785000**	**VAV-B32R**
VA0001767	Reynolds Packaging L	South River	4.37	381532	0784953	VAV-B32R
VA0088986	Black Rock Mobile Hor	South River X-Trib	1.00	381513	0784851	VAV-B32R

MONITORING STATIONS

STREAM	NAME	RIVER MILE	RECORD	LAT	LONG
South River	1BSTH004.21	4.21	3/16/07	381529	0784952
South River	1BSTH004.59	4.59	9/12/07	381517	0785000
South River	1BSTH004.86	4.86	8/8/07	381506	0785008
South River	1BSTH005.90	5.9	8/8/07	381418	0785026
South River	1BSTH007.02	7.02	8/8/07	381335	0784958
South River	1BSTH007.80	7.8	3/2/70	381307	0785014
South River	1BSTH008.88	8.88	8/8/07	381224	0785025
South River	1BSTH009.83	9.83	8/8/07	381155	0785050
South River	1BSTH010.87	10.87	8/8/07	381115	0785056
South River	1BSTH011.70	11.7	8/8/07	381051	0785106
South River	1BSTH005.36	5.36	4/27/10	381440	0785011
Paine Run	1BPAN002.70	2.70	5/1/91	381153	0784739

PUBLIC WATER SUPPLY INTAKES

OWNER	STREAM	RIVER MILE
None		

WATER QUALITY MANAGEMENT PLANNING REGULATION

Is this discharge addressed in the WQMP regulation? **No**

If Yes, what effluent limitations or restrictions does the WQMP regulation impose on this discharge?

PARAMETER	ALLOCATION

WATERSHED NAME

VAV=B32R South River

FLOW FREQUENCY DETERMINATION

The VDEQ has operated a continuous record gage on South River at Harriston, VA (#01627500) from 1925-1951 and since 1968. The gage is located approximately 0.5 miles downstream of the discharge point. The flow frequencies for the discharge point were determined using a drainage area comparison. Due to the fact that the STP discharge is also included in the gage statistics, the average discharge flow for the STP over the past 12 months (0.031 mgd) was subtracted from all of the flow frequencies for the discharge point. The flow frequencies are presented below:

South River near Harriston, VA (#01627500):

Drainage Area = 212 mi^2

1Q10 =	42.7 cfs	High Flow 1Q10 =	62.0 cfs
1Q30 =	35.4 cfs	High Flow 7Q10 =	69.1 cfs
7Q10 =	48.1 cfs	High Flow 30Q10 =	85.0 cfs
30Q10 =	51.9 cfs	Harmonic Mean =	130 cfs
30Q5 =	57.6 cfs		

South River at discharge point:

Drainage Area = 210 mi^2

1Q10 =	42.3 cfs	(27.3 mgd)	High Flow 1Q10 =	61.4 cfs	(39.7 mgd)
1Q30 =	35.1 cfs	(22.6 mgd)	High Flow 7Q10 =	68.4 cfs	(44.2 mgd)
7Q10 =	47.6 cfs	(30.8 mgd)	High Flow 30Q10 =	84.2 cfs	(54.4 mgd)
30Q10 =	51.4 cfs	(33.2 mgd)	Harmonic Mean =	129 cfs	(83.4 mgd)
30Q5 =	57.0 cfs	(36.8 mgd)			

This does not take into account any future increases in STP discharge flow, which will be reflected in future reference gage flow statistics. The analysis does not address any other withdrawals, discharges, or springs lying between the gage and the outfall.

The high flow months are January through May.

Peer Reviewer: DMJ Date: 3/28/16

EFFLUENT/STREAM MIXING EVALUATION

Mixing zone predictions were made with the Virginia DEQ Mixing Zone Analysis Version 2.1 program. The predictions are based on the discharge and receiving stream characteristics, and are presented below.

0.10 MGD Annual Mix	**0.040 MGD Annual Mix**
Effluent Flow = 0.10 MGD Stream 7Q10 = 30.8 MGD Stream 30Q10 = 33.2 MGD Stream 1Q10 = 27.3 MGD Stream slope = 0.004 ft/ft Stream width = 45 ft Bottom scale = 3 Channel scale = 1 ---------- Mixing Zone Predictions @ 7Q10 Depth = 1.1613 ft Length = 1650.63 ft Velocity = .9153 ft/sec Residence Time = .0209 days Recommendation: A complete mix assumption is appropriate for this situation and the entire 7Q10 may be used. ---------- Mixing Zone Predictions @ 30Q10 Depth = 1.2157 ft Length = 1586.53 ft Velocity = .9422 ft/sec Residence Time = .0195 days Recommendation: A complete mix assumption is appropriate for this situation and the entire 30Q10 may be used. ---------- Mixing Zone Predictions @ 1Q10 Depth = 1.079 ft Length = 1759.01 ft Velocity = .8735 ft/sec Residence Time = .5594 hours Recommendation: A complete mix assumption is appropriate for this situation and the entire 1Q10 may be used.	Effluent Flow = 0.040 MGD Stream 7Q10 = 30.8 MGD Stream 30Q10 = 33.2 MGD Stream 1Q10 = 27.3 MGD Stream slope = 0.004 ft/ft Stream width = 45 ft Bottom scale = 3 Channel scale = 1 ---------- Mixing Zone Predictions @ 7Q10 Depth = 1.1599 ft Length = 1652.34 ft Velocity = .9146 ft/sec Residence Time = .0209 days Recommendation: A complete mix assumption is appropriate for this situation and the entire 7Q10 may be used. ---------- Mixing Zone Predictions @ 30Q10 Depth = 1.2144 ft Length = 1587.94 ft Velocity = .9416 ft/sec Residence Time = .0195 days Recommendation: A complete mix assumption is appropriate for this situation and the entire 30Q10 may be used. ---------- Mixing Zone Predictions @ 1Q10 Depth = 1.0776 ft Length = 1761.05 ft Velocity = .8728 ft/sec Residence Time = .5605 hours Recommendation: A complete mix assumption is appropriate for this situation and the entire 1Q10 may be used.

APPENDIX B

EFFLUENT SCREENING AND EFFLUENT LIMITATIONS

EFFLUENT LIMITATIONS

A comparison of technology and water quality-based limits was performed and the most stringent limits were selected, as summarized in the table below.

Outfall 001 **Final Limits** **Design Flow: 0.040 MGD**

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average		Maximum		Frequency	Sample Type
Flow (MGD)	1	NL		NL		1/Day	Estimate
---	---	Monthly Average		Weekly Average		---	---
BOD_5	2,4	30 mg/L	4.5 kg/d	45 mg/L	6.8 kg/d	1/Month	Grab
TSS	2,6	30 mg/L	4.5 kg/d	45 mg/L	6.8 kg/d	1/Month	Grab
Effluent Chlorine (TRC)(mg/L)*	7	2.0		2.4		1/Day	Grab
E. coli (N/100 mL) (geometric mean)	3	126		NA		4/Month* in any month in a calendar year 10 am to 4 pm or 4/Month** 10 am to 4 pm	Grab
---	---	Minimum		Maximum		---	---
pH (S.U.)	3	6.5		9.5		1/Day	Grab
Contact Chlorine (TRC)(mg/L)*	3,7	1.0		NA		1/Day	Grab

Refer to permit for definitions of monitoring frequencies and sample types
** Applicable only when chlorination is used for disinfection*
*** Applicable if an alternative to chlorination is used for disinfection*

BASIS DESCRIPTIONS

1. *VPDES Permit Regulation (9VAC25-31)*
2. *Federal Effluent Requirements (Secondary Treatment Regulation - 40CFR133)*
3. *Water Quality Standards (9VAC25-260)*
4. *South River Stream Model*
5. *WQMP Regulation (9VAC25-720-50)*
6. *South River TMDL for Bacteria, Sediment, and TP approved on December 3, 2009*
7. *Best Professional Judgment (BPJ)*

Outfall 001 **Final Limits** **Design Flow: 0.10 MGD**

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average		Maximum		Frequency	Sample Type
Flow (MGD)	1	NL		NL		Continuous	TIRE
---	---	Monthly Average		Weekly Avg.		---	---
BOD_5	3,4,8	30 mg/L	11 kg/d	45 mg/L	17 kg/d	1/Week	Grab
TSS	2,8	30 mg/L	11 kg/d	45 mg/L	17 kg/d	1/Month	Grab
Effluent Chlorine (TRC)(mg/L)*	7	1.8		2.1		3/Day at 4-hour intervals	Grab
E. coli (N/100 mL) (geometric mean)	3,6	126		NA		4/Month* in any month in a calendar year 10 am to 4 pm or 2 Days/Week** 10 am to 4 pm	Grab
---	---	Minimum		Maximum		---	---
pH (S.U.)	3	6.5		9.5		1/Day	Grab
Contact Chlorine (TRC)(mg/L)*	3,7	1.0		NA		3/Day at 4-hour intervals	Grab

Refer to permit for definitions of monitoring frequencies and sample types
** Applicable only when chlorination is used for disinfection*
*** Applicable if an alternative to chlorination is used for disinfection*

BASIS DESCRIPTIONS

1. *VPDES Permit Regulation (9VAC25-31)*
2. *Federal Effluent Requirements (Secondary Treatment Regulation - 40CFR133)*
3. *Water Quality Standards (9VAC25-260)*
4. *South River Stream Model*
5. *WQMP Regulation (9VAC25-720-50)*
6. *South River TMDL for Bacteria, Sediment, and TP approved on December 3, 2009*
7. *Best Professional Judgment (BPJ)*
8. *The requirement for grab samples instead of 4-hour composite samples for BOD_5 and TSS has been carried forward from the previous permit based on the fact that the detention time of the lagoon is greater than 24 hours.*

Outfall 999 **Final Limits** **Permitted Flow: 0.040 MGD and Design Flow: 0.10 MGD**

PARAMETER	BASIS FOR LIMITS	EFFLUENT LIMITATIONS		MONITORING REQUIREMENTS	
		Annual Average	Maximum	Frequency	Sample Type
TP – Year to Date (lb/yr)	1	NA	NL	1/Month	Calculated
TP – Calendar Year (lb/yr)	1	NA	5,177**	1/Year	Calculated

Outfall 999 is not an existing discharge point. It is a means for reporting total loads discharged of TP.

*** The maximum TP is a combined allocation for the following Augusta County Service Authority facilities: Stuarts Draft WWTP (VA0066877), Vesper View STP (VA0067962), and Harriston WWTP (VA0027901). The TMDL is expressed as 2348.3 kg/yr. The ACSA requested that the limit be expressed as lb/yr to be consistent with the units used in their Nutrient General Permit VAN010092. The conversion is as follows: (2348.3 kg/year) X (2.2047 lb/kg) = 5,177 lb/year*

BASIS DESCRIPTIONS

1. South River TMDL for TP approved on December 3, 2009

LIMITING FACTORS – OVERVIEW:
The following potential limiting factors have been considered in developing this permit and fact sheet:

Water Quality Management Plan Regulation (WQMP) (9VAC25-720)	
A. TMDL limits	**E. coli, TSS, TP**
B. Non-TMDL WLAs	**None**
C. CBP (TN & TP) WLAs	**TN and TP via GP VAN010092**
Federal Effluent Guidelines	**BOD_5, TSS, pH**
BPJ/Agency Guidance limits	**TRC (contact), TRC (effluent)**
Water Quality-based Limits - numeric	**BOD_5, DO, Ammonia-N, E. coli, pH**
Water Quality-based Limits - narrative	**None**
Technology-based Limits (9VAC25-40-70)	**None**
Whole Effluent Toxicity (WET)	**Not Applicable**
Storm Water Limits	**NEC approved with reissuance of the permit**

EVALUATION OF THE EFFLUENT – CONVENTIONAL POLLUTANTS:
Harriston WWTP is included in the South River Joint DO model maintained in the DEQ-Valley Regional Office, which is available for review upon request.

The following values were demonstrated to be protective:

	0.10 MGD	0.040 MGD
$cBOD_5$ (mg/L)	25	25
TKN (mg/L)	20	20
DO (mg/L)	0	0

Because a $cBOD_5$ concentration of 25 mg/L is equivalent to a BOD_5 concentration of 30 mg/L, a BOD_5 permit limit of 30 mg/L has been carried forward from the previous permit.

The previous permit included a reduced monitoring frequency of 1/Month for BOD_5 at the 0.10 MGD design flow. Based on Guidance Memo No. 14-2003, the facility does not currently qualify for consideration of reduced monitoriong requirements because the facility was issued a Warning Letter during the past three years. Accordingly, the BOD_5 monitoring frequency has been changed to 1/Week for the 0.10 MGD design flow tier. This facility received a Warning Letter dated September 11, 2014 for TSS concentration average and maximum exceedances. Guidance Memo No. 14-2003 indicates that "to qualify for consideration of reduced monitoring requirements, the facility should not have been issued any Warning Letters, NOVs, or be under any Consent Orders, Consent Decrees, Executive Compliance Agreements, or related enforcement documents during the past three years". The sampling frequency for BOD_5 has been changed from 1/Month to 1/Week the 0.10 MGD design flow tier.

Based on the model, it was determined that no TKN limits were needed because a secondary sewage treatment plant is not expected to discharge effluent with TKN concentrations greater than 20 mg/L.

The TSS limits are consistent with the Secondary Treatment Regulation and the TMDL WLA and have been carried forward from the previous permit.

The pH limits reflect the current WQS for pH in the receiving stream and have been carried forward from the previous permit.

EVALUATION OF THE EFFLUENT – DISINFECTION:

The TRC disinfection requirements have been carried forward from the previous permit. In addition to the minimum TRC contact requirements, E. coli monitoring at a frequency of 4/Month for one month of each calendar year and an associated limit have been carried forward from the previous permit to ensure effective disinfection is achieved. If an alternative to chlorination is utilized, E. coli monitoring at a frequency of 4/Month every month (0.040 MGD flow tier) and 2 Days/Week (0.10 MGD design flow) and an associated limit have been included at this reissuance in accordance with Guidance Memo No. 14-2003.

The South River Bacteria TMDL assigned an E. coli WLA of 1.74×10^{11} cfu/year to this facility. The WLA is based on a flow of 0.10 MGD and an E. coli concentration of 126 cfu/100 mL. The E. coli limits are consistent with the TMDL WLA and are protective of the current WQS for E. coli in the receiving stream.

EVALUATION OF THE EFFLUENT – NUTRIENTS:

In accordance with § 62.1-44.19:14.C.5. of the Code of Virginia, this discharger has submitted a Registration Statement and DEQ has recognized that they are covered under the General Virginia Pollutant Discharge Elimination System (VPDES) Watershed Permit Regulation for TN and TP Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia (9VAC25-820) (GP). The load limit for TN is 5,695 pounds per calendar year and TP is 761 pounds per calendar year.

Harriston WWTP is "bubbled" with ACSA's other facilities. ASCA will address load increases associated with new or expanded discharges from this facility by managing the aggregate delivered load discharged from all of the facilities under common ownership or operation in the Potomac-Shenandoah watershed.

This facility was also included in the South River TMDL and given a TP WLA of 2,348.3 kg/year, which is a combined allocation for the following ACSA facilities: Stuarts Draft WWTP, Harriston STP, and Vesper View STP. The TP contribution from this facility was calculated from a 0.10 MGD flow and 2.5 mg/L TP concentration. The permittee requested that the TP limit of 2,348.3 kg/year be expressed as 5,177 lb/year in the permit to be consistent with the units used in the WGP.

EVALUATION OF THE EFFLUENT – TOXICS:

Stream: Water quality data for the receiving stream were obtained from Ambient Monitoring Station No. 1BSTH007.80 on South River located downstream of the discharge point. A Flow Frequency Determination for the receiving stream was generated March 26, 2016, and is included in Appendix A.

Stream Information			
90% Annual Temp (°C) =	23.2	90% pH (SU) =	8.8
Mean Hardness (mg/L) =	97	10% pH (SU) =	7.5

All toxic pollutants, including Ammonia-N and TRC, are assumed absent in the receiving stream because there are no data for these parameters directly above the discharge.

Discharge: The pH, temperature, and hardness values were obtained from data submitted by the permittee. .

Effluent Information				
90% Annual Temp (°C) =	26		90% pH (SU) =	7.3
Mean Hardness (mg/L) =	91		10% pH (SU) =	6.9

WQC and WLAs were calculated for the WQS parameters for which data are available. The resulting WQC and WLAs are presented in this appendix. Current agency guidelines recommends the evaluation of toxic pollutant limits for TRC

and Ammonia-N be based on default effluent concentrations of 20 mg/L and 9 mg/L, respectively. The effluent data were analyzed per the protocol for evaluation of effluent toxic pollutants included in this appendix with the following results:

- TRC – 0.040 and 0.10 MGD Flow Tiers: WLA_a values were greater than 4.0 mg/L. Based on Guidance Memo No. 14-2003, the WLA_a and WLA_c were set to 4.0 mg/L. There was no change in the limits from the previous reissuance.

- Ammonia-N: Ammonia-N was evaluated as a Tier 2 parameter. The previous reissuance evaluation included 97th percentiles of effluent concentrations. These values were based on previously reported data and have been carried forward at this reissuance. Because there are new data in terms of receiving stream and effluent temperature and pH data, A-D baselines were updated to reflect the new information. No limits are necessary for Ammonia-N at the 0.040 and 0.10 MGD flow tiers.

- Additional effluent monitoring has been required for two parameters with the results to be submitted with the next permit application. The additional effluent monitoring applies regardless of which flow tier the facility operates.

WQC-WLA SPREADSHEET INPUT – 0.040 MGD (TIER 1)

WATER QUALITY CRITERIA / WASTE LOAD ALLOCATION ANALYSIS

Facility Name: Harriston WWTP
Receiving Stream: South River
Permit No.: VA0027901
Date: 4/28/2016
Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information			Stream Flows			Mixing Information			Effluent Information		
Mean Hardness (as CaCO3) =	97	mg/L	1Q10 (Annual) =	27.3	MGD	Annual	- 1Q10 Flow =	100 %	Mean Hardness (as CaCO3) =	91	mg/L
90% Temperature (Annual) =	23.2	deg C	7Q10 (Annual) =	30.8	MGD		- 7Q10 Flow =	100 %	90% Temp (Annual) =	26	deg C
90% Temperature (Wet season) =		deg C	30Q10 (Annual) =	33.2	MGD		- 30Q10 Flow =	100 %	90% Temp (Wet season) =		deg C
90% Maximum pH =	8.8	SU	1Q10 (Wet season) =		MGD	Wet Season	- 1Q10 Flow =	%	90% Maximum pH =	7.3	SU
10% Maximum pH =	7.5	SU	30Q10 (Wet season) =		MGD		- 30Q10 Flow =	%	10% Maximum pH =	6.9	SU
Tier Designation =	1		30Q5 =	36.8	MGD				Current Discharge Flow =	0.040	MGD
Public Water Supply (PWS) Y/N? =	N		Harmonic Mean =	83.4	MGD				Discharge Flow for Limit Analysis =	0.040	MGD
V(alley) or P(iedmont)? =	V										
Trout Present Y/N? =	N										
Early Life Stages Present Y/N? =	Y										

Footnotes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise.
2. All flow values are expressed as Million Gallons per Day (MGD).
3. Discharge volumes are highest monthly average or 2C maximum for Industries and design flows for Municipals.
4. Hardness expressed as mg/l CaCO3. Standards calculated using Hardness values in the range of 25-400 mg/l CaCO3.
5. "Public Water Supply" protects for fish & water consumption. "Other Surface Waters" protects for fish consumption only.
6. Carcinogen "Y" indicates carcinogenic parameter.
7. Ammonia WQSs selected from separate tables, based on pH and temperature.
8. Metals measured as Dissolved, unless specified otherwise.
9. WLA = Waste Load Allocation (based on standards).
10. WLA = Waste Load Allocation (based on standards).
11. WLAs are based on mass balances (less background, if data exist).
12. Acute - 1 hour avg. concentration not to be exceeded more than 1/3 years.
13. Chronic - 4 day avg. concentration (30 day avg. for Ammonia) not to be exceeded more than 1/3 years.
14. Mass balances employ 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens, and Harmonic Mean for Carcinogens. Actual flows employed are a function of the mixing analysis and may be less than the actual flows.
15. Effluent Limitations are calculated elsewhere using the minimum WLA and EPA's statistical approach (Technical Support Document).

WQC-WLA SPREADSHEET OUTPUT – 0.040 MGD (TIER 1)

Facility Name:	Permit No.:	WATER QUALITY CRITERIA				NON-ANTIDEGRADATION WASTE LOAD ALLOCATIONS		
Harriston WWTP	VA0027901	0.040 MGD Discharge Flow - Mix per "Mixer"				0.040 MGD Discharge - Mix per "Mixer"		
Receiving Stream:	Date:	Aquatic Protection		Human Health		Aquatic Protection		Human
South River	4/14/2016			Public Water	Other Surface			
Toxic Parameter and Form	Carcinogen?	Acute	Chronic	Supplies	Waters	Acute	Chronic	Health
Chlorine, Total Residual	N	1.9E-02 mg/L	1.1E-02 mg/L	None	None	1.3E+01 mg/L	8.5E+00 mg/L	N/A

WQC-WLA SPREADSHEET INPUT – 0.040 MGD (TIER 2)

WATER QUALITY CRITERIA / WASTE LOAD ALLOCATION ANALYSIS

Facility Name: Harriston WWTP
Receiving Stream: South River
Permit No.: VA0027901
Date: 4/28/2016
Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information			Stream Flows			Mixing Information			Effluent Information		
Mean Hardness (as CaCO3) =	97	mg/L	1Q10 (Annual) =	27.3	MGD	Annual	- 1Q10 Flow =	100 %	Mean Hardness (as CaCO3) =	91	mg/L
90% Temperature (Annual) =	23.2	deg C	7Q10 (Annual) =	30.8	MGD		- 7Q10 Flow =	100 %	90% Temp (Annual) =	26	deg C
90% Temperature (Wet season) =		deg C	30Q10 (Annual) =	33.2	MGD		- 30Q10 Flow =	100 %	90% Temp (Wet season) =		deg C
90% Maximum pH =	8.8	SU	1Q10 (Wet season) =		MGD	Wet Season	- 1Q10 Flow =	%	90% Maximum pH =	7.3	SU
10% Maximum pH =	7.5	SU	30Q10 (Wet season) =		MGD		- 30Q10 Flow =	%	10% Maximum pH =	6.9	SU
Tier Designation =	2		30Q5 =	36.8	MGD				1992 Discharge Flow =	0.040	MGD
Public Water Supply (PWS) Y/N? =	N		Harmonic Mean =	83.4	MGD				Discharge Flow for Limit Analysis =	0.040	MGD
V(alley) or P(iedmont)? =	V										
Trout Present Y/N? =	N										
Early Life Stages Present Y/N? =	Y										

Footnotes:

1. All concentrations expressed as micrograms/ liter (ug/ l), unless noted otherwise.
2. All flow values are expressed as Million Gallons per Day (MGD).
3. Discharge volumes are highest monthly average or 2C maximum for Industries and design flows for Municipals.
4. Hardness expressed as mg/ l CaCO3. Standards calculated using Hardness values in the range of 25-400 mg/ l CaCO3.
5. "Public Water Supply" protects for fish & water consumption. "Other Surface Waters" protects for fish consumption only.
6. Carcinogen "Y" indicates carcinogenic parameter.
7. Ammonia WQSs selected from separate tables, based on pH and temperature.
8. Metals measured as Dissolved, unless specified otherwise.
9. WLA = Waste Load Allocation (based on standards).
10. WLA = Waste Load Allocation (based on standards).
11. WLAs are based on mass balances (less background, if data exist).
12. Acute - 1 hour avg. concentration not to be exceeded more than 1/ 3 years.
13. Chronic - 4 day avg. concentration (30 day avg. for Ammonia) not to be exceeded more than 1/ 3 years.
14. Mass balances employ 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens, and Harmonic Mean for Carcinogens. Actual flows employed are a function of the mixing analysis and may be less than the actual flows.
15. Effluent Limitations are calculated elsewhere using the minimum WLA and EPA's statistical approach (Technical Support Document).

WQC-WLA SPREADSHEET OUTPUT – 0.040 MGD (TIER 2)

Facility Name: Harriston WWTP
Permit No.: VA0027901
Receiving Stream: South River
Date: 4/20/2016

Toxic Parameter and Form	Carcinogen?	97th Percentiles of Effluent Concentrations: Daily	4-Day	30-Day	Expected Value of Upstream Data	Current Downstream Mix Concentrations: Acute	Chronic	H-Health
Ammonia-N (Annual)	N	19	0	9	0	0	0	0

Facility Name: Harriston WWTP
Receiving Stream: South River

	WATER QUALITY CRITERIA (0.040 MGD Discharge Flow - 100% Stream Mix)				INSTREAM BASELINES			ANTIDEGRADATION WASTE LOAD ALLOCATIONS (0.040 MGD Discharge - 100% Stream Mix)		
	Aquatic Protection		Human Health					Aquatic Protection		Human
Toxic Parameter and Form	Acute	Chronic	Public Water Supplies	Other Surface Waters	Acute	Chronic	H-Health	Acute	Chronic	Health
Ammonia-N (Annual)	1.9E+00 mg/ L	3.9E-01 mg/ L	None	None	5.0E-01 mg/ L	1.0E-01 mg/ L	None	3.4E+02 mg/ L	8.7E+01 mg/ L	N/A

Facility Name: Harriston WWTP
Receiving Stream: South River

	WATER QUALITY CRITERIA (0.040 MGD Discharge Flow - Mix per "Mixer")				NON-ANTIDEGRADATION WASTE LOAD ALLOCATIONS (0.040 MGD Discharge - Mix per "Mixer")			MOST RESTRICTIVE WASTE LOAD ALLOCATIONS (0.040 MGD Discharge Flow)		
	Aquatic Protection		Human Health		Aquatic Protection		Human	Aquatic Protection		Human
Toxic Parameter and Form	Acute	Chronic	Public Water Supplies	Other Surface Waters	Acute	Chronic	Health	Acute	Chronic	Health
Ammonia-N (Annual)	1.9E+00 mg/ L	3.9E-01 mg/ L	None	None	1.3E+03 mg/ L	3.2E+02 mg/ L	N/A	3.4E+02 mg/ L	8.7E+01 mg/ L	N/A

WQC-WLA SPREADSHEET INPUT – 0.10 MGD (TIER 1)

WATER QUALITY CRITERIA / WASTE LOAD ALLOCATION ANALYSIS

Facility Name: Harriston WWTP
Receiving Stream: South River
Permit No.: VA0027901
Date: 4/28/2016
Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information			Stream Flows			Mixing Information			Effluent Information		
Mean Hardness (as CaCO3) =	97	mg/L	1Q10 (Annual) =	27.3	MGD	Annual - 1Q10 Flow =	100	%	Mean Hardness (as CaCO3) =	91	mg/L
90% Temperature (Annual) =	23.2	deg C	7Q10 (Annual) =	30.8	MGD	- 7Q10 Flow =	100	%	90% Temp (Annual) =	26	deg C
90% Temperature (Wet season) =		deg C	30Q10 (Annual) =	33.2	MGD	- 30Q10 Flow =	100	%	90% Temp (Wet season) =		deg C
90% Maximum pH =	8.8	SU	1Q10 (Wet season) =		MGD	Wet Season - 1Q10 Flow =		%	90% Maximum pH =	7.3	SU
10% Maximum pH =	7.5	SU	30Q10 (Wet season) =		MGD	- 30Q10 Flow =		%	10% Maximum pH =	6.9	SU
Tier Designation =	1		30Q5 =	36.8	MGD				Current Discharge Flow =	0.10	MGD
Public Water Supply (PWS) Y/N? =	N		Harmonic Mean =	83.4	MGD				Discharge Flow for Limit Analysis =	0.10	MGD
V(alley) or P(iedmont)? =	V										
Trout Present Y/N? =	N										
Early Life Stages Present Y/N? =	Y										

Footnotes:

1. All concentrations expressed as micrograms/ liter (ug/ l), unless noted otherwise.
2. All flow values are expressed as Million Gallons per Day (MGD).
3. Discharge volumes are highest monthly average or 2C maximum for Industries and design flows for Municipals.
4. Hardness expressed as mg/ l CaCO3. Standards calculated using Hardness values in the range of 25-400 mg/ l CaCO3.
5. "Public Water Supply" protects for fish & water consumption. "Other Surface Waters" protects for fish consumption only.
6. Carcinogen "Y" indicates carcinogenic parameter.
7. Ammonia WQSs selected from separate tables, based on pH and temperature.
8. Metals measured as Dissolved, unless specified otherwise.
9. WLA = Waste Load Allocation (based on standards).
10. WLA = Waste Load Allocation (based on standards).
11. WLAs are based on mass balances (less background, if data exist).
12. Acute - 1 hour avg. concentration not to be exceeded more than 1/ 3 years.
13. Chronic - 4 day avg. concentration (30 day avg. for Ammonia) not to be exceeded more than 1/ 3 years.
14. Mass balances employ 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens, and Harmonic Mean for Carcinogens. Actual flows employed are a function of the mixing analysis and may be less than the actual flows.
15. Effluent Limitations are calculated elsewhere using the minimum WLA and EPA's statistical approach (Technical Support Document).

WQC-WLA SPREADSHEET OUTPUT – 0.10 MGD (TIER 1)

Facility Name:	Permit No.:	WATER QUALITY CRITERIA				NON-ANTIDEGRADATION WASTE LOAD ALLOCATIONS		
Harriston WWTP	VA0027901	0.100 MGD Discharge Flow - Mix per "Mixer"				0.100 MGD Discharge - Mix per "Mixer"		
Receiving Stream:	Date:			Human Health				
		Aquatic Protection		Public Water	Other Surface	Aquatic Protection		Human
Toxic Parameter and Form	Carcinogen?	Acute	Chronic	Supplies	Waters	Acute	Chronic	Health
South River	4/14/2016							
Chlorine, Total Residual	N	1.9E-02 mg/L	1.1E-02 mg/L	None	None	5.2E+00 mg/L	3.4E+00 mg/L	N/A

WQC-WLA SPREADSHEET INPUT – 0.10 MGD (TIER 2)

WATER QUALITY CRITERIA / WASTE LOAD ALLOCATION ANALYSIS

Facility Name: Harriston WWTP
Receiving Stream: South River
Permit No.: VA0027901
Date: 4/28/2016
Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information			Stream Flows			Mixing Information			Effluent Information		
Mean Hardness (as CaCO3) =	97	mg/L	1Q10 (Annual) =	27.3	MGD	Annual - 1Q10 Flow =	100	%	Mean Hardness (as CaCO3) =	91	mg/L
90% Temperature (Annual) =	23.2	deg C	7Q10 (Annual) =	30.8	MGD	- 7Q10 Flow =	100	%	90% Temp (Annual) =	26	deg C
90% Temperature (Wet season) =		deg C	30Q10 (Annual) =	33.2	MGD	- 30Q10 Flow =	100	%	90% Temp (Wet season) =		deg C
90% Maximum pH =	8.8	SU	1Q10 (Wet season) =		MGD	Wet Season - 1Q10 Flow =		%	90% Maximum pH =	7.3	SU
10% Maximum pH =	7.5	SU	30Q10 (Wet season) =		MGD	- 30Q10 Flow =		%	10% Maximum pH =	6.9	SU
Tier Designation =	2		30Q5 =	36.8	MGD				1992 Discharge Flow =	0.040	MGD
Public Water Supply (PWS) Y/N? =	N		Harmonic Mean =	83.4	MGD				Discharge Flow for Limit Analysis =	0.10	MGD
V(alley) or P(iedmont)? =	V										
Trout Present Y/N? =	N										
Early Life Stages Present Y/N? =	Y										

Footnotes:

1. All concentrations expressed as micrograms/ liter (ug/ l), unless noted otherwise.
2. All flow values are expressed as Million Gallons per Day (MGD).
3. Discharge volumes are highest monthly average or 2C maximum for Industries and design flows for Municipals.
4. Hardness expressed as mg/ l CaCO3. Standards calculated using Hardness values in the range of 25-400 mg/ l CaCO3.
5. "Public Water Supply" protects for fish & water consumption. "Other Surface Waters" protects for fish consumption only.
6. Carcinogen "Y" indicates carcinogenic parameter.
7. Ammonia WQSs selected from separate tables, based on pH and temperature.
8. Metals measured as Dissolved, unless specified otherwise.
9. WLA = Waste Load Allocation (based on standards).
10. WLA = Waste Load Allocation (based on standards).
11. WLAs are based on mass balances (less background, if data exist).
12. Acute - 1 hour avg. concentration not to be exceeded more than 1/ 3 years.
13. Chronic - 4 day avg. concentration (30 day avg. for Ammonia) not to be exceeded more than 1/ 3 years.
14. Mass balances employ 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens, and Harmonic Mean for Carcinogens. Actual flows employed are a function of the mixing analysis and may be less than the actual flows.
15. Effluent Limitations are calculated elsewhere using the minimum WLA and EPA's statistical approach (Technical Support Document).

WQC-WLA SPREADSHEET OUTPUT – 0.10 MGD (TIER 2)

Facility Name: Harriston WWTP
Receiving Stream: South River
Permit No.: VA0027901
Date: 4/20/2016

Toxic Parameter and Form	Carcinogen?	97th Percentiles of Effluent Concentrations: Daily	4-Day	30-Day	Expected Value of Upstream Data	Current Downstream Mix Concentrations: Acute	Chronic	H-Health
Ammonia-N (Annual)	N	19	0	9	0	0	0	0

Facility Name: Harriston WWTP
Receiving Stream: South River

PRE - EXPANSION WATER QUALITY CRITERIA
0.040 MGD Discharge Flow - 100% Stream Mix

Toxic Parameter and Form	Aquatic Protection: Acute	Chronic	Human Health: Public Water Supplies	Other Surface Waters
Ammonia-N (Annual)	1.9E+00 mg/ L	3.9E-01 mg/ L	None	None

INSTREAM BASELINES

Acute	Chronic	H-Health
5.0E-01 mg/ L	1.0E-01 mg/ L	None

ANTIDEGRADATION WASTE LOAD ALLOCATIONS
0.100 MGD Discharge - 100% Stream Mix

Aquatic Protection: Acute	Chronic	Human Health
1.4E+02 mg/ L	3.5E+01 mg/ L	N/A

Facility Name: Harriston WWTP
Receiving Stream: South River

POST - EXPANSION WATER QUALITY CRITERIA
0.100 MGD Discharge Flow - Mix per "Mixer"

Toxic Parameter and Form	Aquatic Protection: Acute	Chronic	Human Health: Public Water Supplies	Other Surface Waters
Ammonia-N (Annual)	2.0E+00 mg/ L	4.0E-01 mg/ L	None	None

NON-ANTIDEGRADATION WASTE LOAD ALLOCATIONS
0.100 MGD Discharge - Mix per "Mixer"

Aquatic Protection: Acute	Chronic	Human Health
5.5E+02 mg/ L	1.3E+02 mg/ L	N/A

MOST RESTRICTIVE WASTE LOAD ALLOCATIONS
0.100 MGD Discharge Flow

Aquatic Protection: Acute	Chronic	Human Health
1.4E+02 mg/ L	3.5E+01 mg/ L	N/A

PROTOCOL FOR THE EVALUATION OF THE EFFLUENT – TOXIC POLLUTANTS

Toxic pollutants were evaluated in accordance with OWP Guidance Memo No. 00-2011. Acute and Chronic WLAs (WLA_a and WLA_c) were analyzed according to the protocol below using a statistical approach (STAT.exe) to determine the necessity and magnitude of limits. Human Health WLAs (WLA_{hh}) were analyzed according to the same protocol through a simple comparison with the effluent data. If the WLA_{hh} exceeded the effluent datum or data mean, no limits were required. If the effluent datum or data mean exceeded the WLA_{hh}, the WLA_{hh} was imposed as the limit.

Since there are no data available for any toxic pollutants immediately upstream of this discharge, all upstream (background) pollutant concentrations are assumed to be "0".

The steps used in evaluating the effluent data are as follows:

A. If all data are reported as "below detection" or < the Quantification Level (QL) and at least one detection level is ≤ the required QL, then the pollutant is considered to be not significantly present in the discharge and no further monitoring is required.

B. If all data are reported as "below detection", and all detection levels are > the required QL, then an evaluation is performed in which the pollutant is assumed present at the lowest reported detection level.

   B.1. If the evaluation indicates that no limits are needed, then the existing data set is adequate and no further monitoring is required.

   B.2. If the evaluation indicates that limits are needed, then the existing data set is inadequate to make a determination and additional monitoring is required.

   B.3 If the evaluation indicates that limits are needed but the parameter was previously evaluated and no limits were determined to be needed, then the pollutant is considered to be not significantly present in the discharge and no further monitoring is required.

C. If any data value is reported as detectable at or above the required QL, then the data are adequate to determine whether effluent limits are needed.

   C.1. If the evaluation indicates that no limits are needed, then no further monitoring is required.

   C.2. If the evaluation indicates that limits are needed, then the limits and associated requirements are specified in the draft permit.

   C.3. (Exception for Metals data only) If the evaluation indicates that limits are needed, but the data are reported as a form other than "Dissolved" (except for Selenium), then the existing data set is inadequate to make a determination and additional monitoring is required.

Parameter	CASRN	QL (ug/L)	Data (ug/L unless noted otherwise)	Source of Data	Data Eval
METALS					
Antimony, dissolved	7440-36-0	0.2	Previously evaluated, no further monitoring required	---	---
Arsenic, dissolved	7440-38-2	1.0	Previously evaluated, no further monitoring required	---	---
Barium, dissolved	7440-39-3	---	Applicable to PWS waters only	---	---
Cadmium, dissolved	7440-43-9	0.3	Previously evaluated, no further monitoring required	---	---
Chromium III, dissolved	16065-83-1	0.5	Previously evaluated, no further monitoring required	---	---
Chromium VI, dissolved	18540-29-9	0.5	Previously evaluated, no further monitoring required	---	---
Chromium, Total	7440-47-3	---	Applicable to PWS waters only	---	---
Copper, dissolved	7440-50-8	0.5	Previously evaluated, no further monitoring required	---	---
Iron, dissolved	7439-89-6	1.0	Applicable to PWS waters only	---	---
Lead, dissolved	7439-92-1	0.5	Previously evaluated, no further monitoring required	---	---
Manganese, dissolved	7439-96-5	0.2	Applicable to PWS waters only	---	---
Mercury, dissolved	7439-97-6	1.0	Previously evaluated, no further monitoring required	---	---
Nickel, dissolved	7440-02-0	0.5	Previously evaluated, no further monitoring required	---	---
Selenium, total recoverable	7782-49-2	2.0	Previously evaluated, no further monitoring required	---	---
Silver, dissolved	7440-22-4	0.2	Previously evaluated, no further monitoring required	---	---
Thallium, dissolved	7440-28-0	---	Previously evaluated, no further monitoring required	---	---
Zinc, dissolved	7440-66-6	2.0	Previously evaluated, no further monitoring required	---	---
PESTICIDES/PCBS					
Aldrin [C]	309-00-2	0.05	Previously evaluated, no further monitoring required	---	---
Chlordane [C]	57-74-9	0.2	Previously evaluated, no further monitoring required	---	---
Chlorpyrifos	2921-88-2	---	Previously evaluated, no further monitoring required	---	---
DDD [C]	72-54-8	0.1	Previously evaluated, no further monitoring required	---	---
DDE [C]	72-55-9	0.1	Previously evaluated, no further monitoring required	---	---
DDT [C]	50-29-3	0.1	Previously evaluated, no further monitoring required	---	---
Demeton	8065-48-3	---	Previously evaluated, no further monitoring required	---	---
Diazinon	333-41-5	---	**<1**	b	A
Dieldrin [C]	60-57-1	0.1	Previously evaluated, no further monitoring required	---	---
Alpha-Endosulfan	959-98-8	0.1	Previously evaluated, no further monitoring required	---	---
Beta-Endosulfan	33213-65-9	0.1	Previously evaluated, no further monitoring required	---	---
Alpha-Endosulfan + Beta-Endosulfan		---	Previously evaluated, no further monitoring required	---	---
Endosulfan Sulfate	1031-07-8	0.1	Previously evaluated, no further monitoring required	---	---
Endrin	72-20-8	0.1	Previously evaluated, no further monitoring required	---	---
Endrin Aldehyde	7421-93-4	---	Previously evaluated, no further monitoring required	---	---
Guthion	86-50-0	---	Previously evaluated, no further monitoring required	---	---
Heptachlor [C]	76-44-8	0.05	Previously evaluated, no further monitoring required	---	---
Heptachlor Epoxide [C]	1024-57-3	---	Previously evaluated, no further monitoring required	---	---
Hexachlorocyclohexane Alpha-BHC [C]	319-84-6	---	Previously evaluated, no further monitoring required	---	---
Hexachlorocyclohexane Beta-BHC [C]	319-85-7	---	Previously evaluated, no further monitoring required	---	---
Hexachlorocyclohexane Gamma-BHC (synonym = Lindane)	58-89-9	---	Previously evaluated, no further monitoring required	---	---
Kepone	143-50-0	---	Previously evaluated, no further monitoring required	---	---
Malathion	121-75-5	---	Previously evaluated, no further monitoring required	---	---
Methoxychlor	72-43-5	---	Previously evaluated, no further monitoring required	---	---

Parameter	CASRN	QL (ug/L)	Data (ug/L unless noted otherwise)	Source of Data	Data Eval
Mirex	2385-85-5	---	Previously evaluated, no further monitoring required	---	---
Parathion	56-38-2	---	Previously evaluated, no further monitoring required	---	---
PCB Total [C]	1336-36-3	7.0	Previously evaluated, no further monitoring required	---	---
Toxaphene [C]	8001-35-2	5.0	Previously evaluated, no further monitoring required	---	---
BASE NEUTRAL EXTRACTABLES					
Acenaphthene	83-32-9	10.0	Previously evaluated, no further monitoring required	---	---
Anthracene	120-12-7	10.0	Previously evaluated, no further monitoring required	---	---
Benzidine [C]	92-87-5	---	Previously evaluated, no further monitoring required	---	---
Benzo (a) anthracene [C]	56-55-3	10.0	Previously evaluated, no further monitoring required	---	---
Benzo (b) fluoranthene [C]	205-99-2	10.0	Previously evaluated, no further monitoring required	---	---
Benzo (k) fluoranthene [C]	207-08-9	10.0	Previously evaluated, no further monitoring required	---	---
Benzo (a) pyrene [C]	50-32-8	10.0	Previously evaluated, no further monitoring required	---	---
Bis 2-Chloroethyl Ether [C]	111-44-4	---	Previously evaluated, no further monitoring required	---	---
Bis 2-Chloroisopropyl Ether	108-60-1	---	Previously evaluated, no further monitoring required	---	---
Bis-2-Ethylhexyl Phthalate [C]	117-81-7	10.0	Previously evaluated, no further monitoring required	---	---
Butyl benzyl phthalate	85-68-7	10.0	Previously evaluated, no further monitoring required	---	---
2-Chloronaphthalene	91-58-7	---	Previously evaluated, no further monitoring required	---	---
Chrysene [C]	218-01-9	10.0	Previously evaluated, no further monitoring required	---	---
Dibenz(a,h)anthracene [C]	53-70-3	20.0	Previously evaluated, no further monitoring required	---	---
1,2-Dichlorobenzene	95-50-1	10.0	Previously evaluated, no further monitoring required	---	---
1,3-Dichlorobenzene	541-73-1	10.0	Previously evaluated, no further monitoring required	---	---
1,4-Dichlorobenzene	106-46-7	10.0	Previously evaluated, no further monitoring required	---	---
3,3-Dichlorobenzidine [C]	91-94-1	---	Previously evaluated, no further monitoring required	---	---
Diethyl phthalate	84-66-2	10.0	Previously evaluated, no further monitoring required	---	---
Dimethyl phthalate	131-11-3	---	Previously evaluated, no further monitoring required	---	---
Di-n-Butyl Phthalate	84-74-2	10.0	Previously evaluated, no further monitoring required	---	---
2,4-Dinitrotoluene	121-14-2	10.0	Previously evaluated, no further monitoring required	---	---
1,2-Diphenylhydrazine [C]	122-66-7	---	Previously evaluated, no further monitoring required	---	---
Fluoranthene	206-44-0	10.0	Previously evaluated, no further monitoring required	---	---
Fluorene	86-73-7	10.0	Previously evaluated, no further monitoring required	---	---
Hexachlorobenzene [C]	118-74-1	---	Previously evaluated, no further monitoring required	---	---
Hexachlorobutadiene [C]	87-68-3	---	Previously evaluated, no further monitoring required	---	---
Hexachlorocyclopentadiene	77-47-4	---	Previously evaluated, no further monitoring required	---	---
Hexachloroethane [C]	67-72-1	---	Previously evaluated, no further monitoring required	---	---
Indeno(1,2,3-cd)pyrene [C]	193-39-5	20.0	Previously evaluated, no further monitoring required	---	---
Isophorone [C]	78-59-1	10.0	Previously evaluated, no further monitoring required	---	---
Nitrobenzene	98-95-3	10.0	Previously evaluated, no further monitoring required	---	---
N-Nitrosodimethylamine [C]	62-75-9	---	Previously evaluated, no further monitoring required	---	---
N-Nitrosodi-n-propylamine [C]	621-64-7	---	Previously evaluated, no further monitoring required	---	---
N-Nitrosodiphenylamine [C]	86-30-6	---	Previously evaluated, no further monitoring required	---	---
Pyrene	129-00-0	10.0	Previously evaluated, no further monitoring required	---	---
1,2,4-Trichlorobenzene	120-82-1	10.0	Previously evaluated, no further monitoring required	---	---

Parameter	CASRN	QL (ug/L)	Data (ug/L unless noted otherwise)	Source of Data	Data Eval
VOLATILES					
Acrolein	107-02-8	---	Previously evaluated, no further monitoring required	---	---
Acrylonitrile [C]	107-13-1	---	Previously evaluated, no further monitoring required	---	---
Benzene [C]	71-43-2	10.0	Previously evaluated, no further monitoring required	---	---
Bromoform [C]	75-25-2	10.0	Previously evaluated, no further monitoring required	---	---
Carbon Tetrachloride [C]	56-23-5	10.0	Previously evaluated, no further monitoring required	---	---
Chlorobenzene	108-90-7	50.0	Previously evaluated, no further monitoring required	---	---
Chlorodibromomethane [C]	124-48-1	10.0	Previously evaluated, no further monitoring required	---	---
Chloroform	67-66-3	10.0	Previously evaluated, no further monitoring required	---	---
Dichlorobromomethane [C]	75-27-4	10.0	Previously evaluated, no further monitoring required	---	---
1,2-Dichloroethane [C]	107-06-2	10.0	Previously evaluated, no further monitoring required	---	---
1,1-Dichloroethylene	75-35-4	10.0	Previously evaluated, no further monitoring required	---	---
1,2-trans-dichloroethylene	156-60-5	---	Previously evaluated, no further monitoring required	---	---
1,2-Dichloropropane [C]	78-87-5	---	Previously evaluated, no further monitoring required	---	---
1,3-Dichloropropene [C]	542-75-6	---	Previously evaluated, no further monitoring required	---	---
Ethylbenzene	100-41-4	10.0	Previously evaluated, no further monitoring required	---	---
Methyl Bromide	74-83-9	---	Previously evaluated, no further monitoring required	---	---
Methylene Chloride [C]	75-09-2	20.0	Previously evaluated, no further monitoring required	---	---
1,1,2,2-Tetrachloroethane [C]	79-34-5	---	Previously evaluated, no further monitoring required	---	---
Tetrachloroethylene	127-18-4	10.0	Previously evaluated, no further monitoring required	---	---
Toluene	10-88-3	10.0	Previously evaluated, no further monitoring required	---	---
1,1,2-Trichloroethane [C]	79-00-5	---	Previously evaluated, no further monitoring required	---	---
Trichloroethylene [C]	79-01-6	10.0	Previously evaluated, no further monitoring required	---	---
Vinyl Chloride [C]	75-01-4	10.0	Previously evaluated, no further monitoring required	---	---
RADIONUCLIDES					
Beta Particle & Photon Activity (mrem/yr)	N/A	---	Applicable to PWS waters only	---	---
Combined Radium 226 and 228 (pCi/L)	N/A	---	Applicable to PWS waters only	---	---
Gross Alpha Particle Activity (pCi/L)	N/A	---	Applicable to PWS waters only	---	---
Uranium	N/A	---	Applicable to PWS waters only	---	---
ACID EXTRACTABLES					
2-Chlorophenol	95-57-8	10.0	Previously evaluated, no further monitoring required	---	---
2,4-Dichlorophenol	120-83-2	10.0	Previously evaluated, no further monitoring required	---	---
2,4-Dimethylphenol	105-67-9	10.0	Previously evaluated, no further monitoring required	---	---
2,4-Dinitrophenol	51-28-5	---	Previously evaluated, no further monitoring required	---	---
2-Methyl-4,6-Dinitrophenol	534-52-1	---	Previously evaluated, no further monitoring required	---	---
Nonylphenol	104-40-51	---	**NEW REQUIREMENT. Needs to be sampled.**	---	---
Pentachlorophenol [C]	87-86-5	50.0	Previously evaluated, no further monitoring required	---	---
Phenol	108-95-2	10.0	Previously evaluated, no further monitoring required	---	---
2,4,6-Trichlorophenol [C]	88-06-2	10.0	Previously evaluated, no further monitoring required	---	---
MISCELLANEOUS					
Ammonia-N (mg/L) (Annual) (Jul-Sep)	766-41-7	0.2 mg/L	**Default = 9 mg/L**	**a**	**C.1**
Chloride (mg/L)	16887-00-6	---	Previously evaluated, no further monitoring required	---	---

Parameter	CASRN	QL (ug/L)	Data (ug/L unless noted otherwise)	Source of Data	Data Eval
TRC (mg/L)	7782-50-5	0.1 mg/L	**Default = 20 mg/L**	**a**	**C.2**
Cyanide, Free	57-12-5	10.0	Previously evaluated, no further monitoring required	---	---
2,4-Dichlorophenoxy acetic acid (synonym = 2,4-D)	94-75-7	---	Applicable to PWS waters only	---	---
Dioxin (2,3,7,8-tetrachlorodibenzo-p-dioxin)(ppq)	1746-01-6	0.01	Applicable to Paper Mills & Oil Refineries only	---	---
Foaming Agents (as MBAS)	N/A	---	Applicable to PWS waters only	---	---
Sulfide, dissolved	18496-25-8	100	**NEW REQUIREMENT. Needs to be sampled.**	---	---
Nitrate as N (mg/L)	14797-55-8	---	Applicable to PWS waters only	---	---
Sulfate (mg/L)	N/A	---	Applicable to PWS waters only	---	---
Total Dissolved Solids (mg/L)	N/A	---	Applicable to PWS waters only	---	---
Tributyltin	60-10-5	---	Previously evaluated, no further monitoring required	---	---
2-(2,4,5-Trichlorophenoxy) propionic acid (synonym = Silvex)	93-72-1	---	Applicable to PWS waters only	---	---
Hardness (mg/L as $CaCO_3$)	471-34-1	---	No further monitoring required	---	---

The **superscript "C"** following the parameter name indicates that the substance is a known or suspected carcinogen; human health criteria at risk level 10^{-5}.

CASRN = Chemical Abstract Service Registry Number for each parameter is referenced in the current Water Quality Standards. A unique numeric identifier designating only one substance. The Chemical Abstract Service is a division of the American Chemical Society.

"Source of Data" codes:
a = default effluent concentration
b = data from permittee monitoring

"Data Evaluation" codes:
See section titled PROTOCOL FOR THE EVALUATION OF EFFLUENT TOXIC POLLUTANTS for an explanation of the code used.

STAT.EXE RESULTS – 0.40 MGD Flow Tier:

Ammonia-N (Annual)	**TRC**
Chronic averaging period = 30 WLAa = 340 WLAc = 87 Q.L. = 0.2 # samples/mo. = 1 # samples/wk. = 1 Summary of Statistics: # observations = 1 Expected Value = 9 Variance = 29.16 C.V. = 0.6 97th percentile daily values = 21.9007 97th percentile 4 day average = 14.9741 97th percentile 30 day average= 10.8544 # < Q.L. = 0 Model used = BPJ Assumptions, type 2 data No Limit is required for this material The data are: 9	Chronic averaging period = 4 WLAa = 4 WLAc = 4 Q.L. = 0.1 # samples/mo. = 30 # samples/wk. = 7 Summary of Statistics: # observations = 1 Expected Value = 20 Variance = 144 C.V. = 0.6 97th percentile daily values = 48.6683 97th percentile 4 day average = 33.2758 97th percentile 30 day average= 24.1210 # < Q.L. = 0 Model used = BPJ Assumptions, type 2 data A limit is needed based on Acute Toxicity Maximum Daily Limit = 4 Average Weekly Limit = 2.44282882700811 Average Monthly Limit = 1.98248465547072 The data are: 20

STAT.EXE RESULTS – 0.10 MGD Flow Tier:

Ammonia-N (Annual)	**TRC**
Chronic averaging period = 30 WLAa = 140 WLAc = 35 Q.L. = 0.2 # samples/mo. = 4 # samples/wk. = 1 Summary of Statistics: # observations = 1 Expected Value = 9 Variance = 29.16 C.V. = 0.6 97th percentile daily values = 21.9007 97th percentile 4 day average = 14.9741 97th percentile 30 day average= 10.8544 # < Q.L. = 0 Model used = BPJ Assumptions, type 2 data No Limit is required for this material The data are: 9	Chronic averaging period = 4 WLAa = 4 WLAc = 4 Q.L. = 0.1 # samples/mo. = 90 # samples/wk. = 21 Summary of Statistics: # observations = 1 Expected Value = 20 Variance = 144 C.V. = 0.6 97th percentile daily values = 48.6683 97th percentile 4 day average = 33.2758 97th percentile 30 day average= 24.1210 # < Q.L. = 0 Model used = BPJ Assumptions, type 2 data A limit is needed based on Acute Toxicity Maximum Daily Limit = 4 Average Weekly limit = 2.08284308048191 Average Monthly Limit = 1.83933069253993 The data are: 20

APPENDIX C

BASES FOR PERMIT SPECIAL CONDITIONS

Tabulated below are the sections of the permit, with any changes and the reasons for the changes identified. Also provided is the basis for each of the permit special conditions.

Cover Page	Content and format as prescribed by the Guidance Memo No. 14-2003.
Part I.A	**Effluent Limitations and Monitoring Requirements:** Bases for effluent limits and monitoring requirements provided in previous pages of fact sheet. **Outfall 001 – permitted flow tier of 0.040 MGD:** *Updates Part I.A.1 of the previous permit with the following:* • Moved TP monitoring and footnote to Outfall 999.
Part I.A.2	**Effluent Limitations and Monitoring Requirements:** Bases for effluent limits and monitoring requirements provided in previous pages of fact sheet. **Outfall 001 - design flow of 0.10 MGD**: *Updates Part I.A.2 of the previous permit with the following:* • Moved TP monitoring and footnote to Outfall 999. • BOD_5 monitoring frequency revised from 1/Month to 1/Week because the facility no longer meeting the Reduced Monitoring eligibility criteria. • E. coli monitoring frequency changed from 4/Month to 4/Month for one month in any calendar year.
Part I.A.3	**Effluent Limitations and Monitoring Requirements:** Bases for effluent limits and monitoring requirements provided in previous pages of fact sheet. **Outfall 999 – non-discharging outfall used to calculate nutrient loading bundled with other ACSA facilities:** *Updates Part I.A.3 of the previous permit with the following:* • Added TP – Year to Date monitoring from previous Parts I.A.1 and I.A.2.
Part I.B	**Additional Total Residual Chlorine (TRC) and E. coli Limitations and Monitoring Requirements:** *Updates Part I.B of the previous permit with minor wording changes.* Required by Sewage Collection and Treatment (SCAT) Regulations, 9VAC25-790 and Water Quality Standards, 9VAC25-260-170, Bacteria; other waters. Also, 40 CFR 122.41(e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment in order to comply with the permit. This ensures proper operation of chlorination equipment to maintain adequate disinfection.
Part I.C	**Effluent Limitations and Monitoring Requirements – Additional Instructions***: Updates Part I.C of the previous permit with minor wording changes.* QL for BOD_5 changed from 5 mg/L to 2 mg/L. Authorized by VPDES Permit Regulation 9 VAC25-31-190 J.4 and 220.I. This condition is necessary when pollutants are monitored by the permittee and a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limit or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values. §62.1 44.19:13 of the Code of Virginia defines how annual nutrient loads are to be calculated; this is carried forward in 9VAC25-820-70.
Part I.D	**Pretreatment Program Requirements:** *Updates Part I.D of the previous permit with minor wording changes.* VPDES Permit Regulation 9VAC25-31-730 through 900, and 40 CFR Part 403 require certain existing and new sources of pollution to meet specified regulations.

Part I.E.1	**95% Capacity Reopener:** *Updates Part I.E.1 of the previous permit with minor wording changes*. Required by VPDES Permit Regulation 9VAC25-31-200 B 4 for Publicly Owned Treatment Works (POTW) and Privately Owned Treatment Works (PVOTW) permits.
Part I.E.2	**Indirect Dischargers:** *Identical to Part I.E.2 of the previous permit.* Required by VPDES Permit Regulation 9VAC25-31-200.B.1 and B.2 for Publicly Owned Treatment Works (POTW) and Privately Owned Treatment Works (PVOTW) that receive waste from someone other than the owner of the treatment works.
Part I.E.3	**Materials Handling/Storage:** *Updates Part I.E.3 of the previous permit.* 9VAC25-31-50.A prohibits the discharge of any waste into State waters unless authorized by permit. Code of Virginia §62.1-44.16 and §62.1-44.17 authorizes the Board to regulate the discharge of industrial waste or other waste.
Part I.E.4	**O&M Manual Requirement:** *Updates Part I.E.4 of the previous permit with changes to what is required to be included in the O&M Manual.* Required by Code of Virginia Section 62.1-44.19, Sewage Collection and Treatment (SCAT) Regulations 9VAC25-790, and VPDES Permit Regulation 9VAC25-31-190.E for all STPs.
Part I.E.5	**CTC/CTO Requirement:** *Identical to Part I.E.5 of the previous permit.* Required by Code of Virginia 62.1-44.19, Sewage Collection and Treatment (SCAT) Regulations 9VAC25-790, and VPDES Permit Regulation 9VAC25-31-190.E for all STPs.
Part I.E.6	**Licensed Operator Requirement:** *Updates Part I.E.7 of the previous permit with minor wording changes.* The VPDES Permit Regulation 9VAC25-31-200.C, the Code of Virginia 54.1-2300 et seq., and Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals Regulations (18VAC160-20-10 et seq.), require licensure of operators. A class III license is indicated for this facility.
Part I.E.7	**Reliability Class:** *Identical to Part I.E.8 of the previous permit.* Required by Sewage Collection and Treatment (SCAT) Regulations 9VAC25-790 for all municipal facilities.
Part I.E.8	**Water Quality Criteria Monitoring:** *Updates Part I.E.9 of the previous permit with different parameters required to be monitored in Attachment A.* State Water Control Law Section 62.1-44.21 authorizes the Board to request information needed to determine the discharge's impact on State waters. States are required to review data on discharges to identify actual or potential toxicity problems, or the attainment of water quality goals, according to 40 CFR Part 131, Water Quality Standards, Subpart 131.11. To ensure that water quality standards are maintained, the permittee is required to analyze the facility's effluent for the substances noted in Attachment A of this VPDES permit.
Part I.E.9	**Treatment Works Closure Plan:** *Updates Part I.E.10 of the previous permit with minor wording changes*. This condition establishes the requirement to submit a closure plan for the treatment works if the treatment facility is being replaced or is expected to close. This is necessary to ensure industrial sites and treatment works are properly closed so that the risk of untreated waste water discharge, spills, leaks and exposure to raw materials is eliminated and water quality maintained. Section 62.1-44.21 requires every owner to furnish when requested plans, specification, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law.

Part I.E.10	**Reopeners:** a. *Identical to Part I.E.11.a of the previous permit*. Section 303(d) of the Clean Water Act requires that total maximum daily loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The reopener recognizes that, according to section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act. b. *Identical to Part I.E.11.b of the previous permit*. 9VAC25-40-70.A authorizes DEQ to include technology-based annual concentration limits in the permits of facilities that have installed nutrient control equipment, whether by new construction, expansion or upgrade. c. *Updates Part I.E.11.c of the previous permit with minor wording changes*. 9VAC25-31-390.A authorizes DEQ to modify VPDES permits to promulgate amended water quality standards. d. *Identical to Part I.E.11.d of the previous permit*. Required by the VPDES Permit Regulation 9VAC25-31-220.C, for all permits issued to treatment works treating domestic sewage.
Part II	**Conditions Applicable to All VPDES Permits:** *Updates Part II of the previous permit.* VPDES Permit Regulation 9VAC25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed.
Part III.A.1	**Annual Production Monitoring:** *New requirement.* 9VAC25-31.220.I.4 specifies that each permit shall include monitoring requirements for sewage sludge to assure compliance with permit limits.
Part III.A.2	**Metals Limitations & Monitoring:** *New requirement.* The limits and monitoring requirements are based on the VPDES Permit Regulation (9VAC25-31).
Part III.A.3	**Pathogen Reduction Requirements:** *New Requirement.* The requirements are based on the VPDES Permit Regulation (9VAC25-31).
Part III.A.4	**VAR Requirements:** *New Requirement.* The requirements are based on the VPDES Permit Regulation (9VAC25-31).
Part III.B.1	**Approved Sources of Biosolids:** *New Requirement.* 9VAC25-32-440.D states, "*No person shall land apply, market, or distribute biosolids in Virginia unless the biosolids source has been approved by the board.*" 9VAC25-32-510.B and C require sewage sludge to be treated to meet biosolids standards prior to delivery to the land application site.
Part III.B.2	**Annual Report:** *New Requirement.* 9VAC25-31-590.A requires the submittal of an annual report postmarked by February 19 for the previous year. 9VAC25-31-220.I.3. provides for the VPDES permit to require monitoring the volume of biosolids and other measurements as appropriate. 9VAC25-31-590.C requires reports be maintained verifying that sludge treatment for pathogen and vector attraction reduction be maintained by the generator and owner (of the permit). 9VAC25-31-190.H. requires the permittee to submit information requested by the board, within a reasonable time, to determine compliance with the permit. Other specific information and maintenance requirements are identified in 9VAC25-20-147.A.
Part III.B.3	**Recordkeeping:** *New Requirement.* 9VAC25-31-580 outlines record keeping requirements for biosolids. 9VAC25-31-190.J requires all records pertaining to biosolids to be maintained for 5 years, including monitoring information, copies of all reports required by the permit and data used to develop the permit application.

Part III.B.4	**Generator NANI:** *New Requirement.* 9VAC25-31-530.F requires the generator of biosolids who provides biosolids to a land applier, to give notice and necessary information to the land applier. 9VAC25-31-480 states that the preparer of biosolids shall ensure that the applicable requirements in 9VAC25-31 Part VI are met when biosolids are land applied. 9VAC25-31-530.F requires that when the preparer of biosolids gives his biosolids to another person who prepares biosolids, the person who provides the biosolids give the person who receives the biosolids notice and necessary information to comply with 9VAC25-31 Part VI.
Part III.B.5	**Biosolids Management Plan (BSMP):** *Updates Part I.E.6 of the previous permit with changes to what is required to be included in the BSMP.* 9VAC25-31-485.G requires the permit holder to maintain and implement a BSMP and specifies its components. In addition to all materials submitted with permit application, which includes an Odor Control Plan (OCP), a Nutrient Management Plan (NMP) and O&M Manual are required. 9VAC25-31-485.G.3, 9VAC25-790-140 and 9VAC25-790-260 – 300 identify minimum requirements to be included in an O&M Manual. Additional requirements are included in 9VAC25-31-100.Q.12. 9VAC25-31-100.Q.6.requires Generator's OCP and minimum content.
Part III.B.6.	**Reopener:** *New Requirement.* 9VAC25-31-220.C requires inclusion of a reopener clause in the permit to authorize immediate modification of the permit to address changes to standards or requirements for the use or disposal of biosolids, industrial wastewater sludge, or septage.

Deletions:

Part I.E.6.	Sludge Management Plan (SMP) Requirement – The conditions of this section were included with the new Part III.